

FIG. 1a

CELLS  
WITHIN  
CLINICAL  
SAMPLE



SOLUBLIZING AGENTS  
& DENATURATION  
OF NUCLEIC ACID

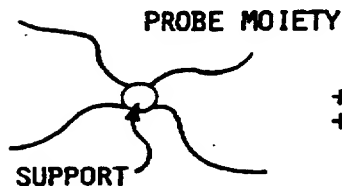
STEP 1

SAMPLE NUCLEIC ACID & CELLULAR DEBRI & IMPURITIES

STEP 2

RETRIEVABLE SUPPORT  
WITH PROBE MOIETY

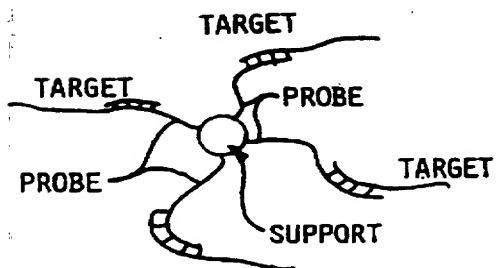
SAMPLE  
NUCLEIC ACID +



+ CELLULAR DEBRIS  
+ IMPURITIES

STEP 3

BINDING CONDITIONS



+ LARGE AMOUNT OF  
DNA  
RNA  
CELLULAR DEBRIS  
IMPURITIES

STEP 4

**FIG. 1b**

**STEP 5**

TARGET

PROBE

TARGET

PROBE

TARGET

TARGET

SMALL AMT OF  
DNA  
RNA  
CELLULAR DEBRIS  
IMPURITIES

NONSPECIFICALLY  
BOUND  
TO SUPPORT

**DENATURATION**

**STEP 6**

TARGET

TARGET

PROBE

SUPPORT

TARGET

TARGET

DNA  
RNA  
CELLULAR  
DEBRIS  
IMPURITIES

NONSPECIFICALLY  
BOUND  
TO SUPPORT  
OR NOW IN  
SOLUTION

**SEPARATION OF OLD SUPPORT FROM SECOND MEDIUM AND INTRODUCTION OF NEW SUPPORT UNDER BINDING CONDITIONS**

**STEP 7**

TARGET

TARGET

PROBE

SUPPORT

PROBE

TARGET

TARGET

A LESSER  
AMOUNT OF  
DNA  
RNA  
CELLULAR  
DEBRIS  
IMPURITIES

PREVIOUSLY  
NONSPECIFICALLY  
BOUND TO SUPPORT AND  
DISSOLVED IN TO SECOND  
MEDIUM AND AGAIN  
NONSPECIFICALLY  
BOUND TO SUPPORT

**REPEAT CYCLE AS NECESSARY**

**STEP 8**

**DETECT TARGET**

FIG. 2a

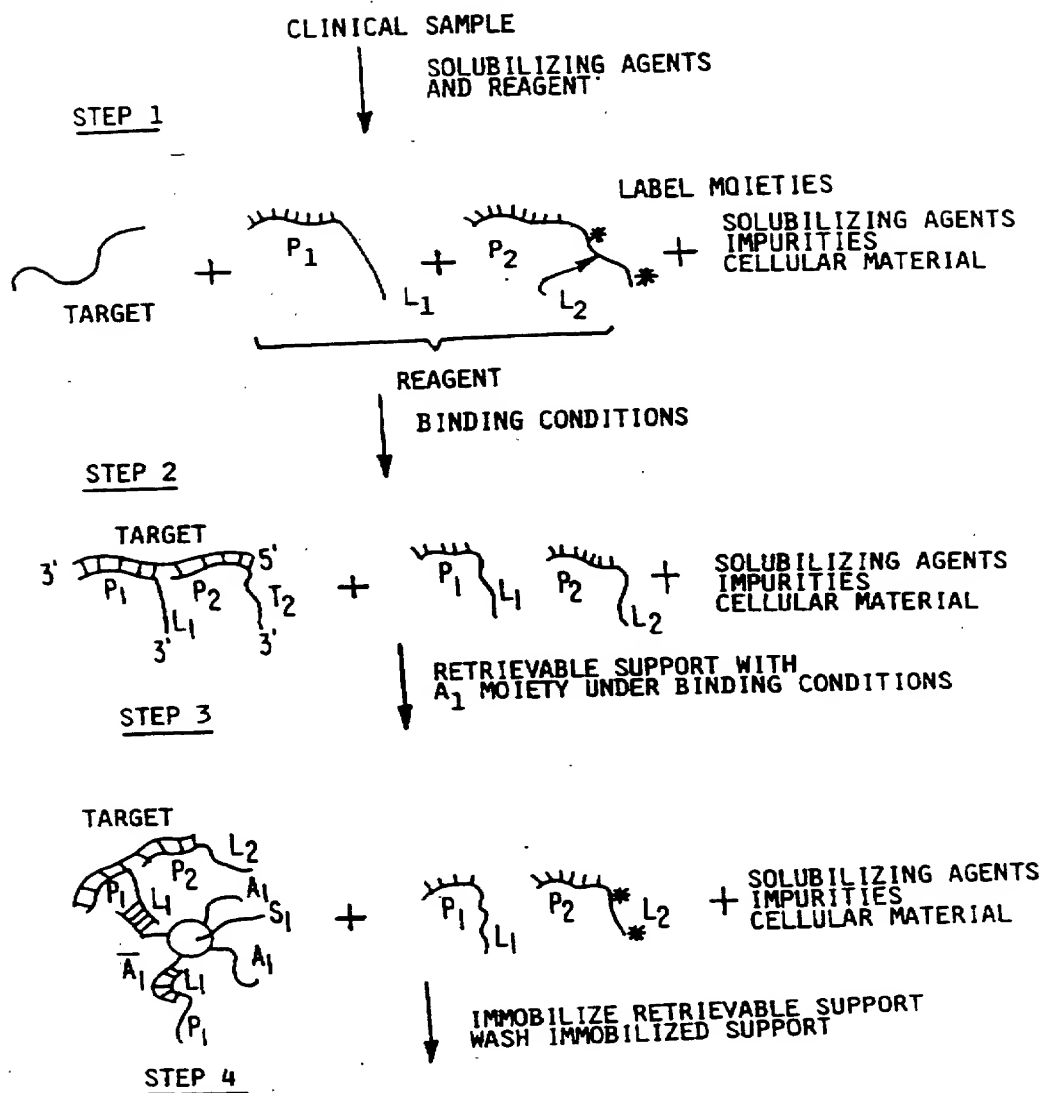
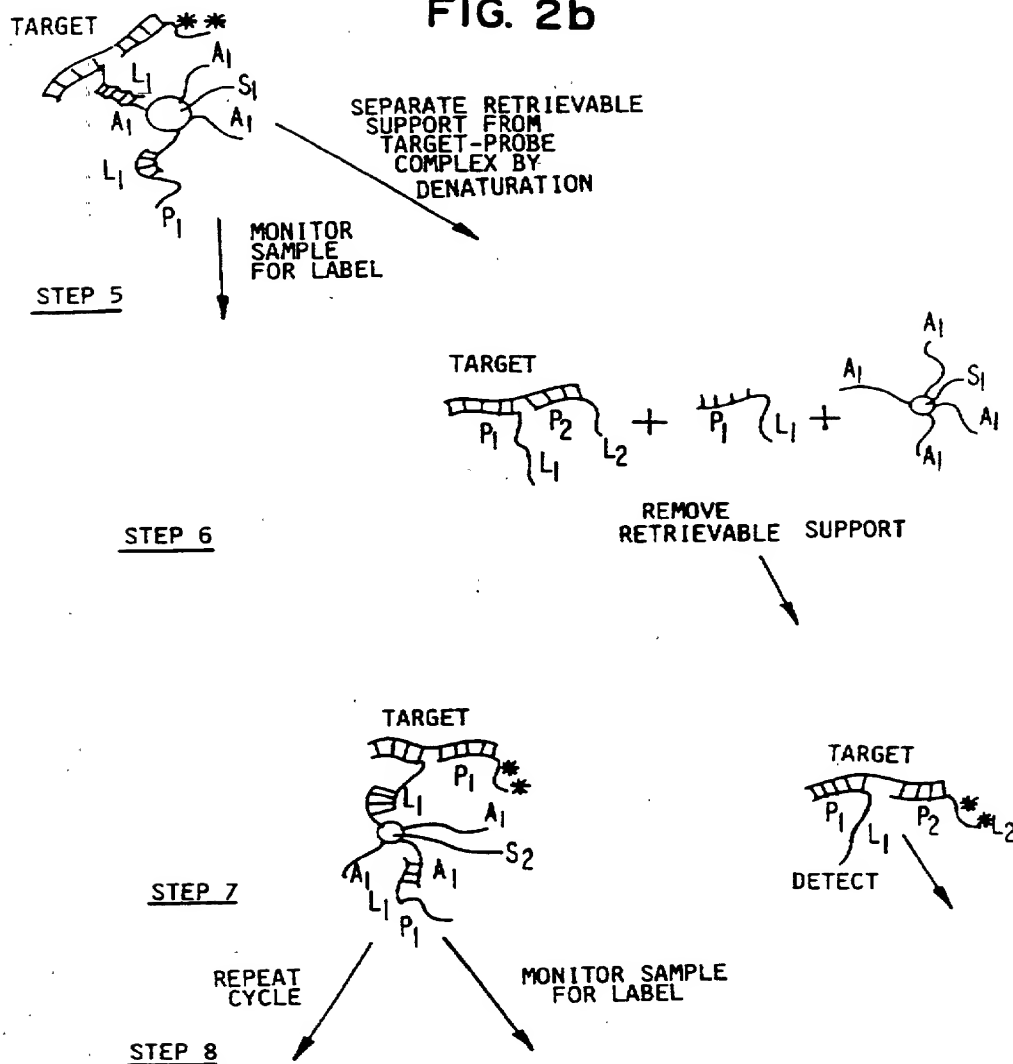
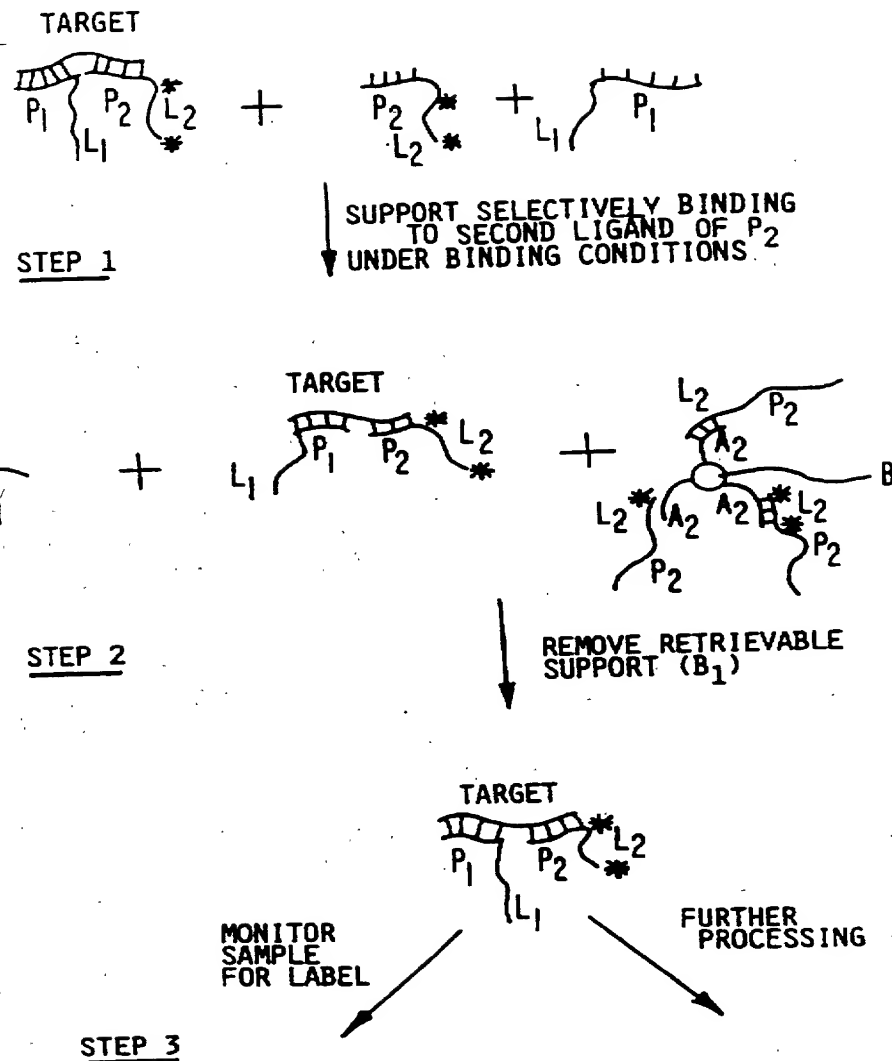


FIG. 2b



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FIG. 3



008050 9065560  
1453306 031810  
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FIG. 4

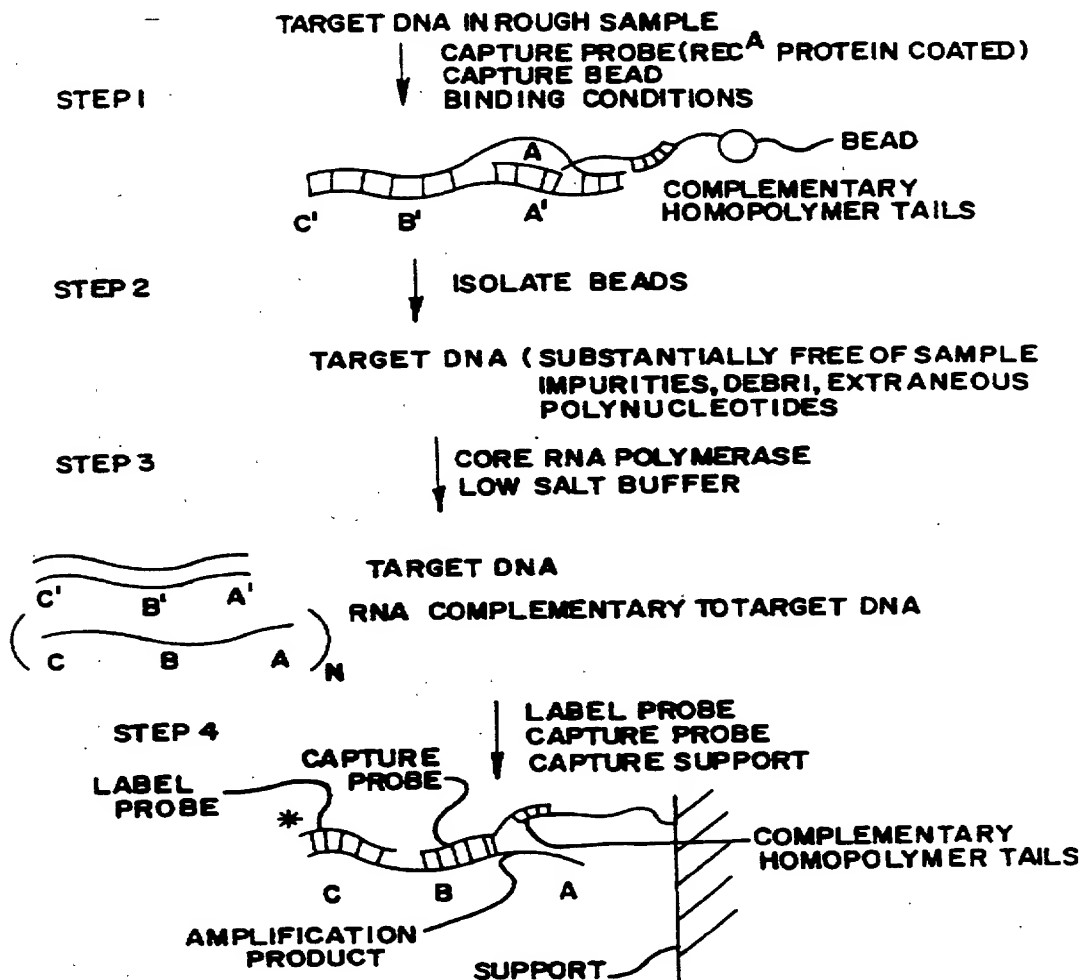
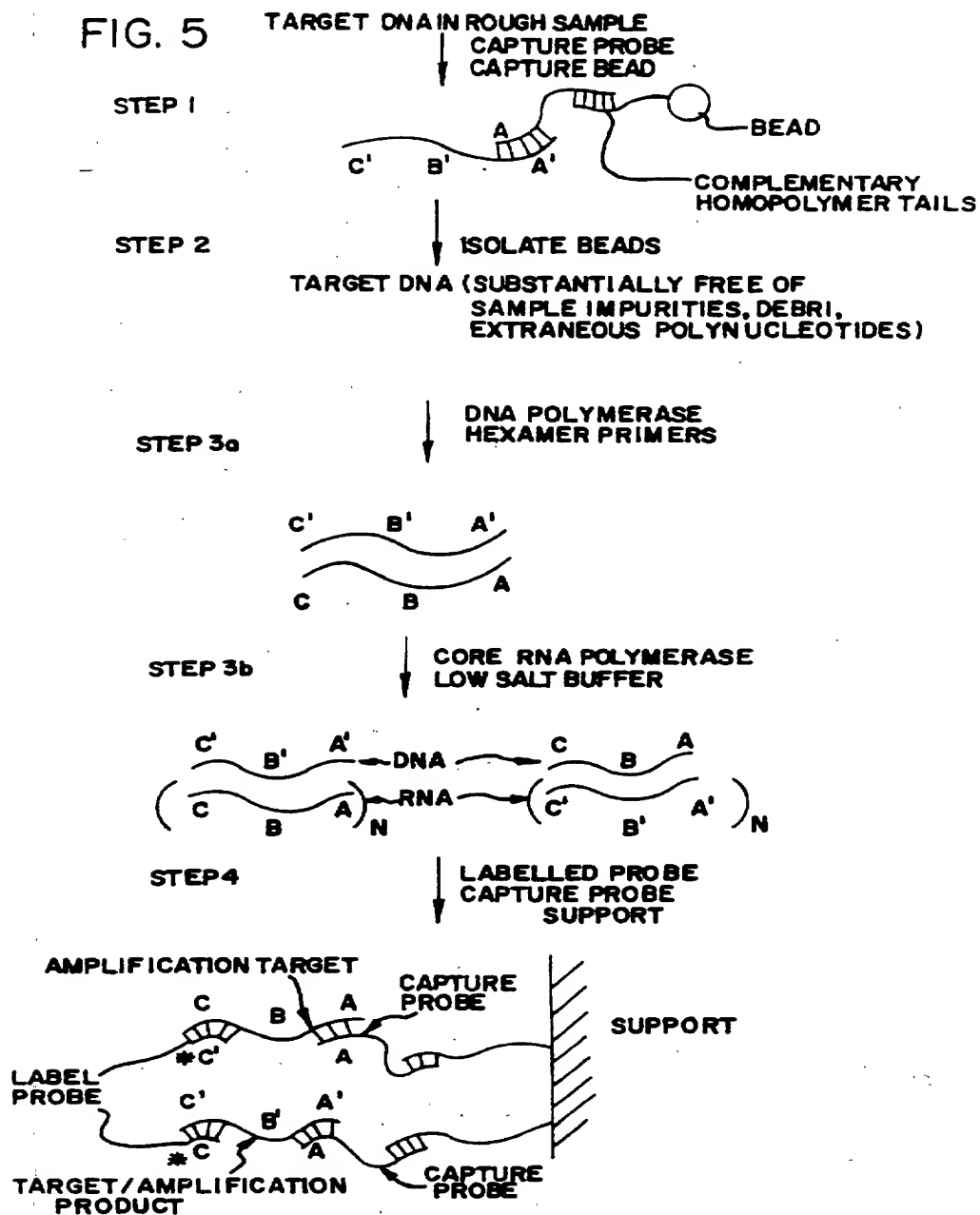


FIG. 5



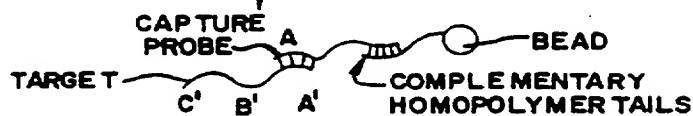
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FIG. 6

STEP 1

TARGET DNA IN ROUGH SAMPLE

CAPTURE PROBE  
CAPTURE BEAD



STEP 2

ISOLATE BEAD

TARGET DNA (SUBSTANTIALLY FREE OF SAMPLE  
IMPURITIES, DEBRI, AND EXTRANEOUS  
POLYNUCLEOTIDES)

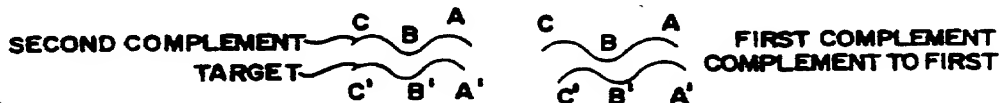
STEP 3a

DNA POLYMERASE  
HEXAMER PRIMERS



STEP 3b

1. DENATURE  
2. DNA POLYMERASE



STEP 4

DENATURE  
LABEL PROBE  
CAPTURE SUPPORT  
CAPTURE PROBE

TARGET/AMPLIFICATION PRODUCT

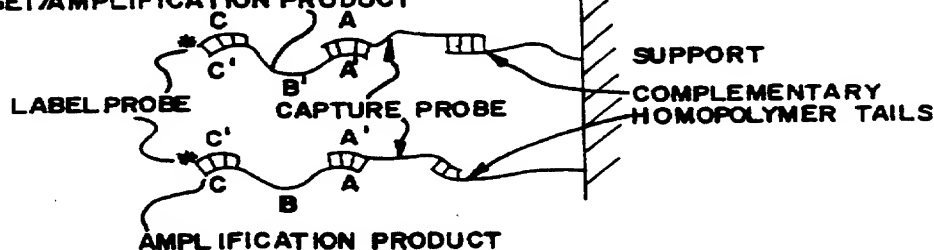
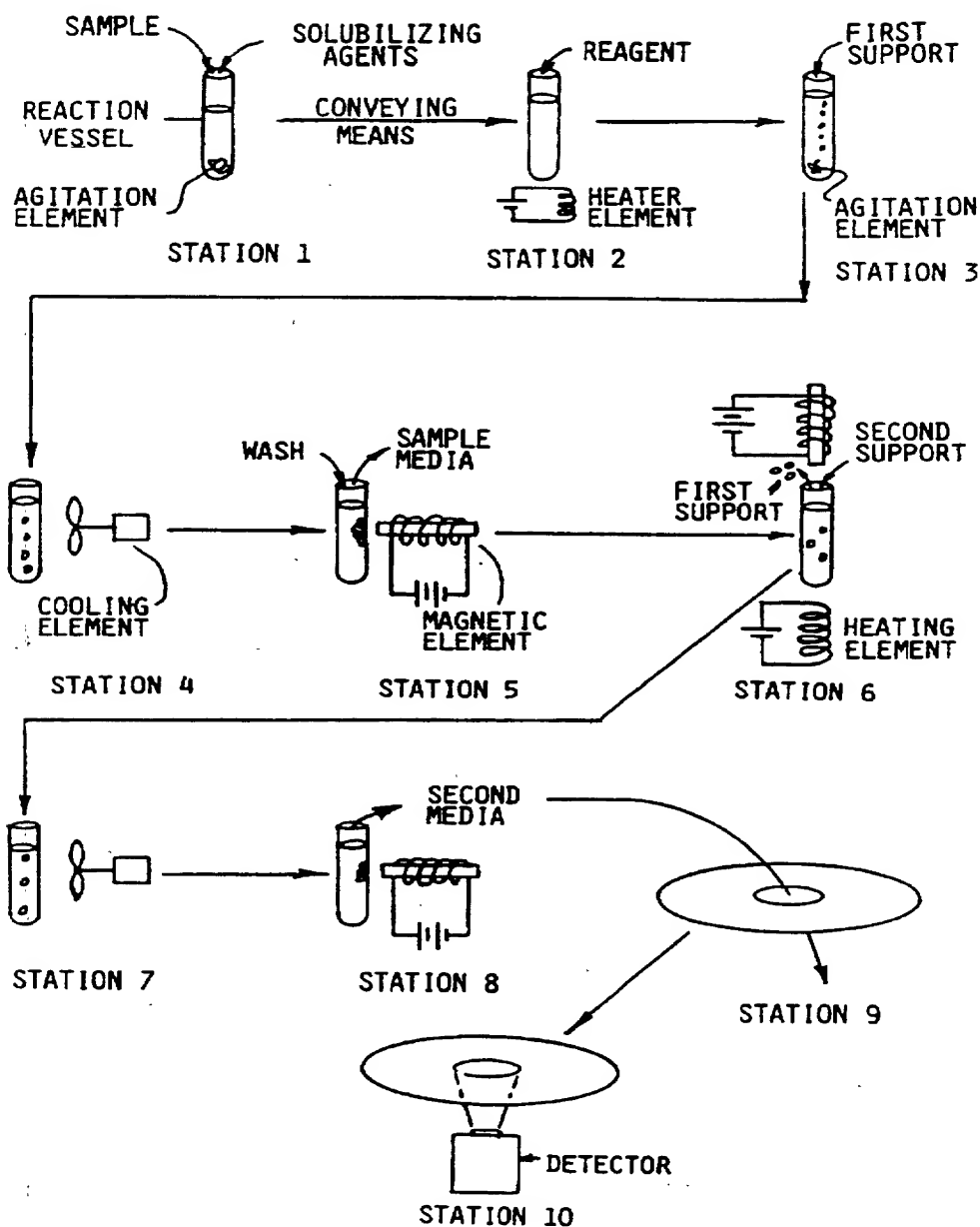


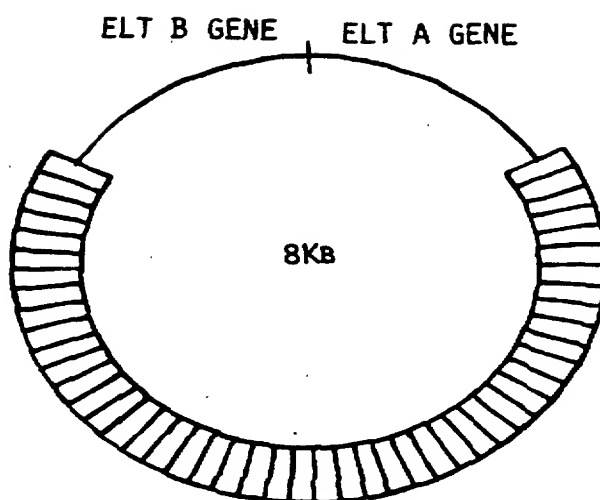


FIG. 7



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**FIG. 8**

WYIS, INC.-US and FOREIGN PATENTS/APPLICATIONS

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FIG. 1a

CELLS  
WITHIN  
CLINICAL  
SAMPLE



SOLUBLIZING AGENTS  
& DENATURATION  
OF NUCLEIC ACID

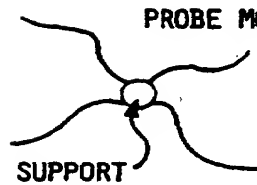
STEP 1

SAMPLE NUCLEIC ACID & CELLULAR DEBRIS & IMPURITIES

STEP 2

RETRIEVABLE SUPPORT  
WITH PROBE MOIETY

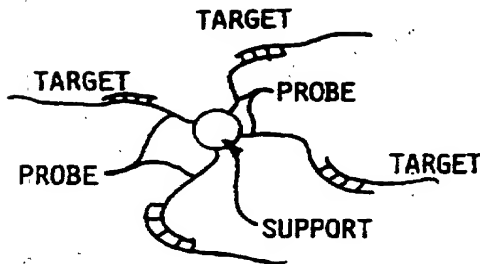
SAMPLE  
NUCLEIC ACID +



+ CELLULAR DEBRIS  
+ IMPURITIES

STEP 3

BINDING CONDITIONS



+ LARGE AMOUNT OF  
DNA  
RNA  
CELLULAR DEBRIS  
IMPURITIES

STEP 4

FIG. 1b

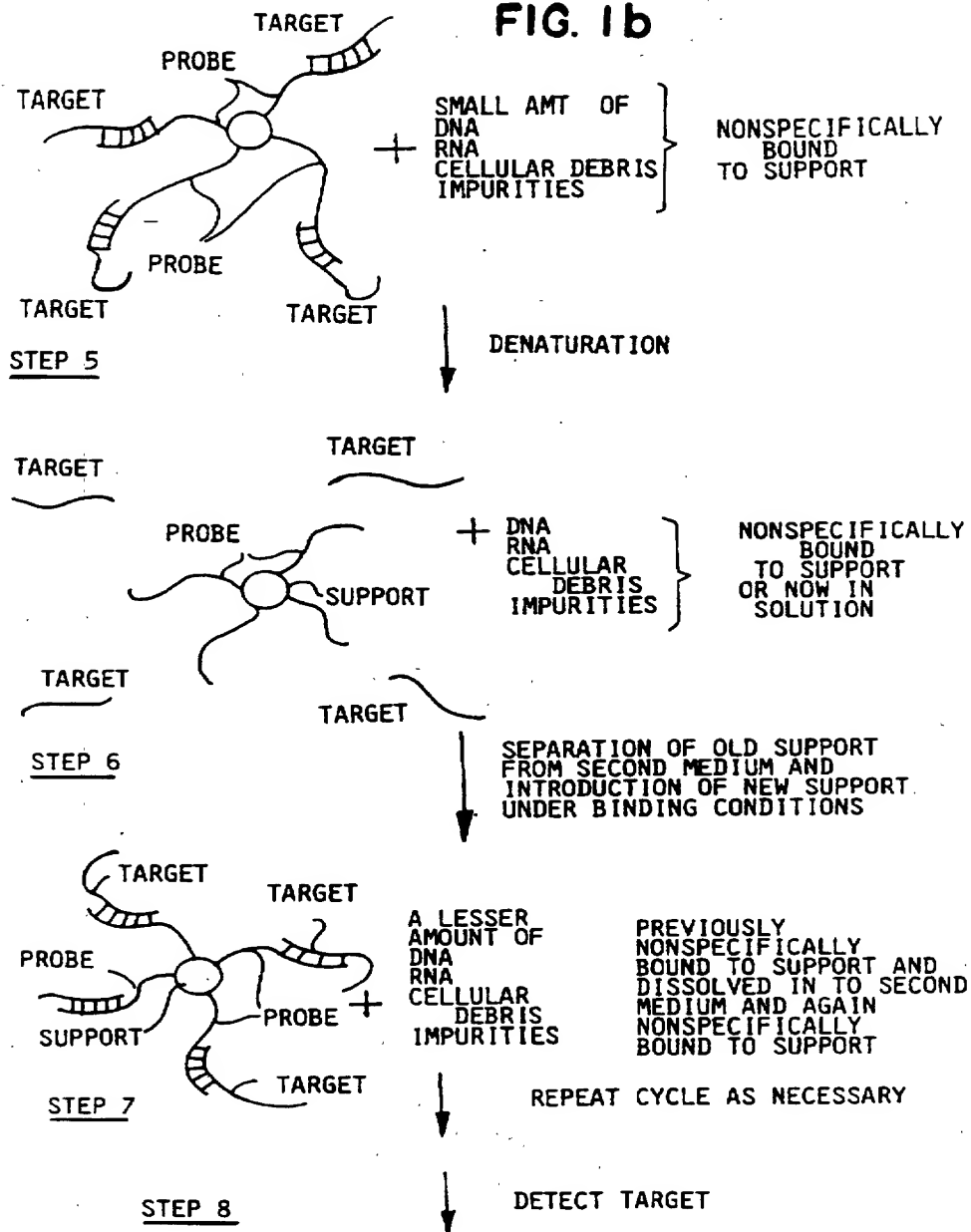
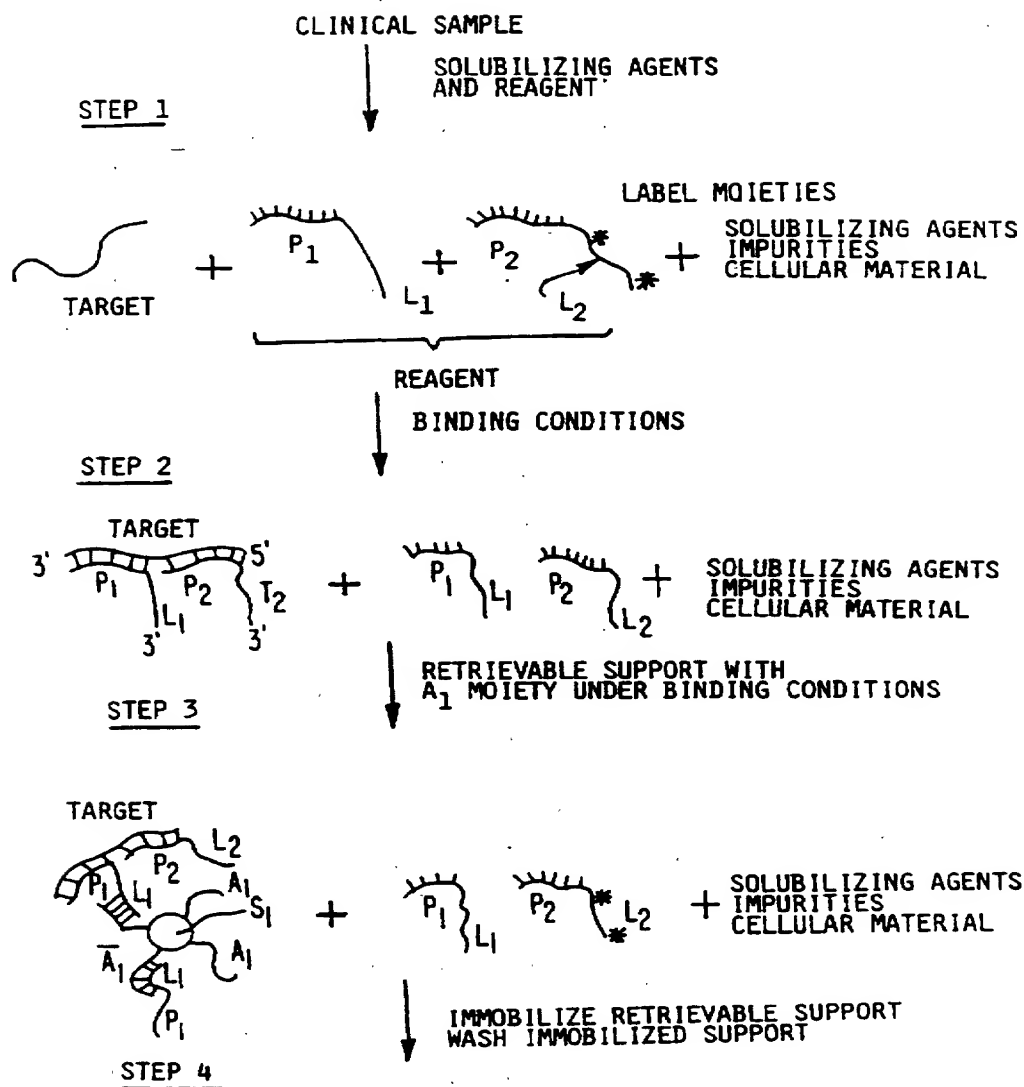
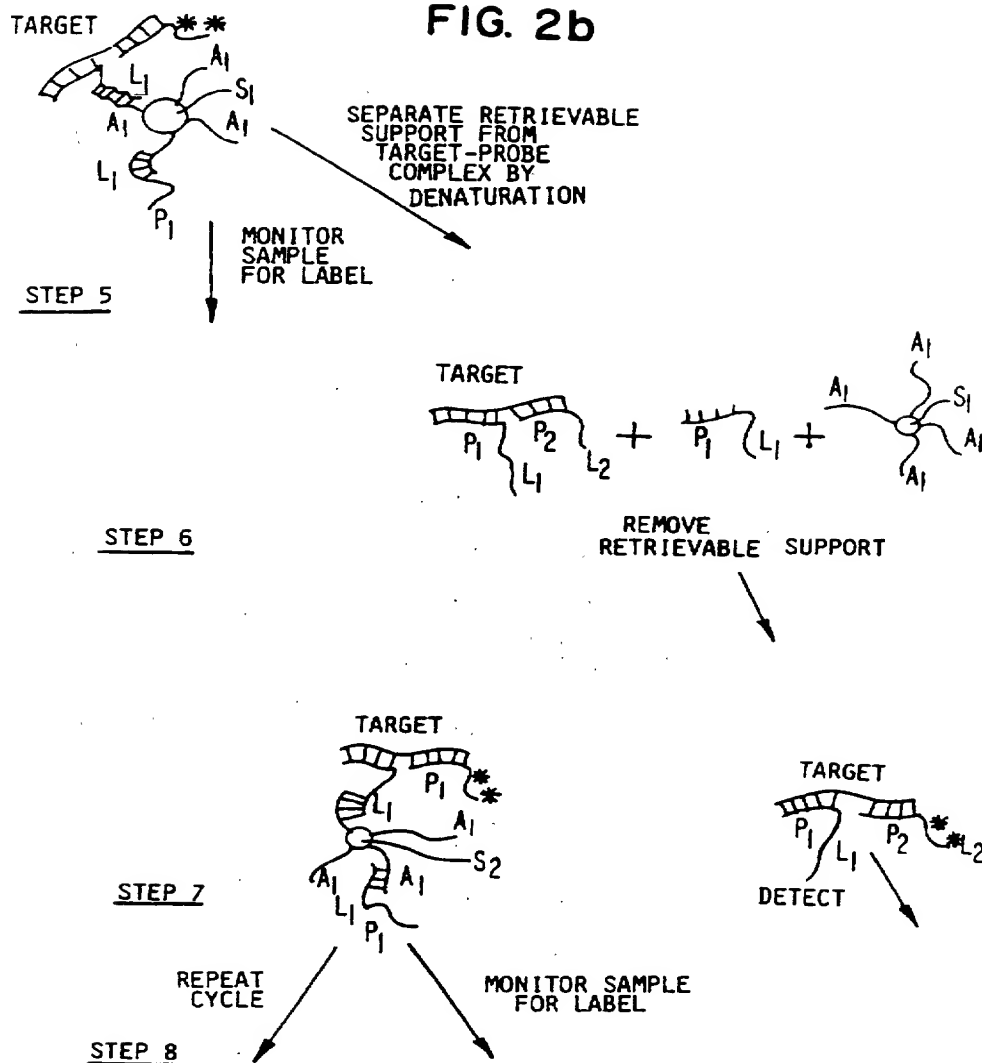


FIG. 2a



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FIG. 2b





**FIG. 3**

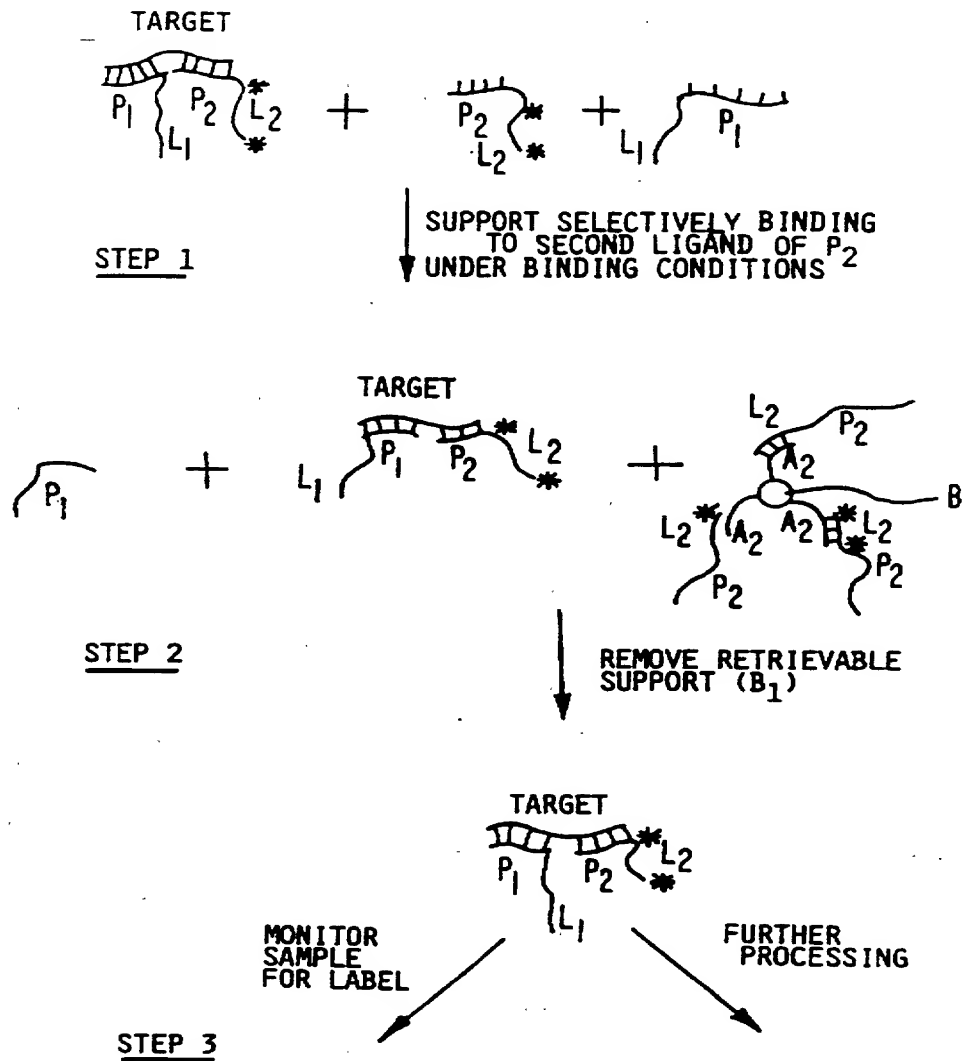
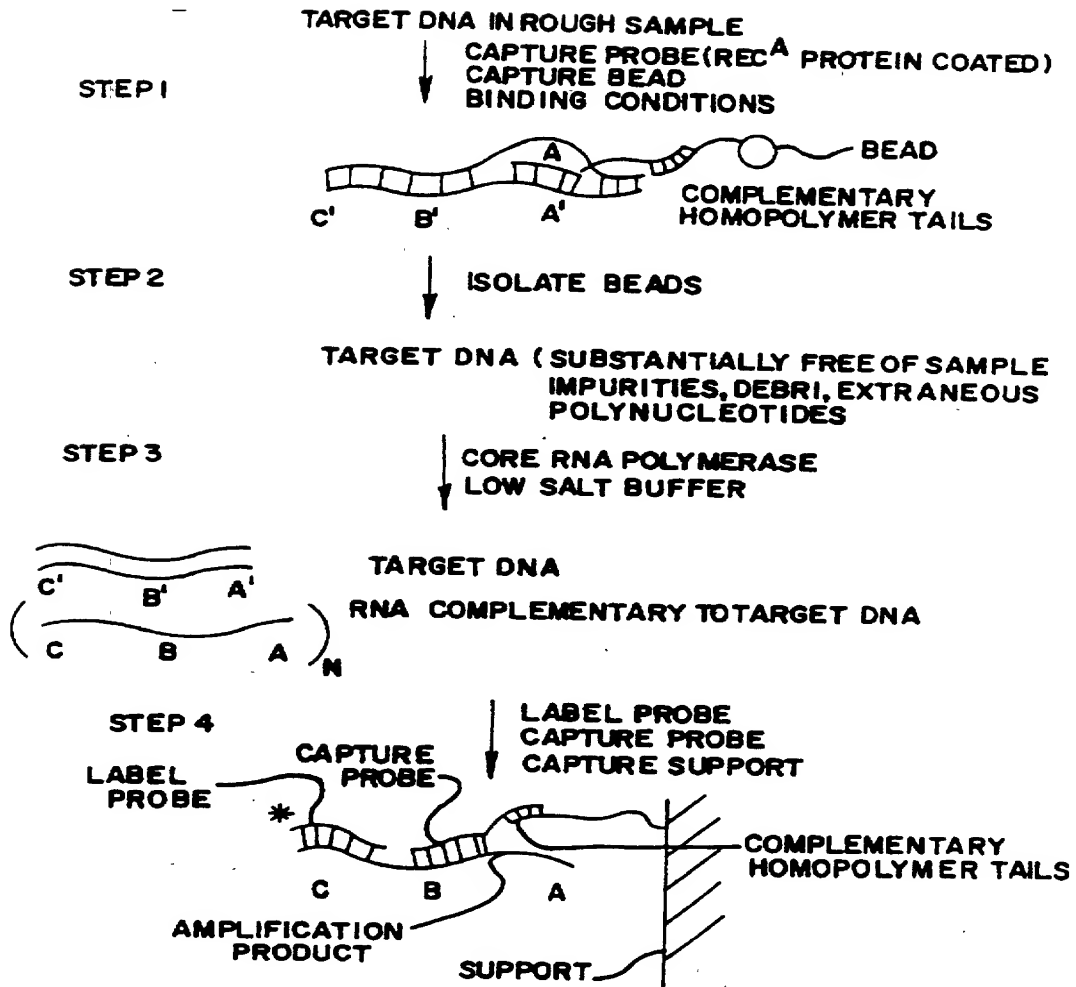
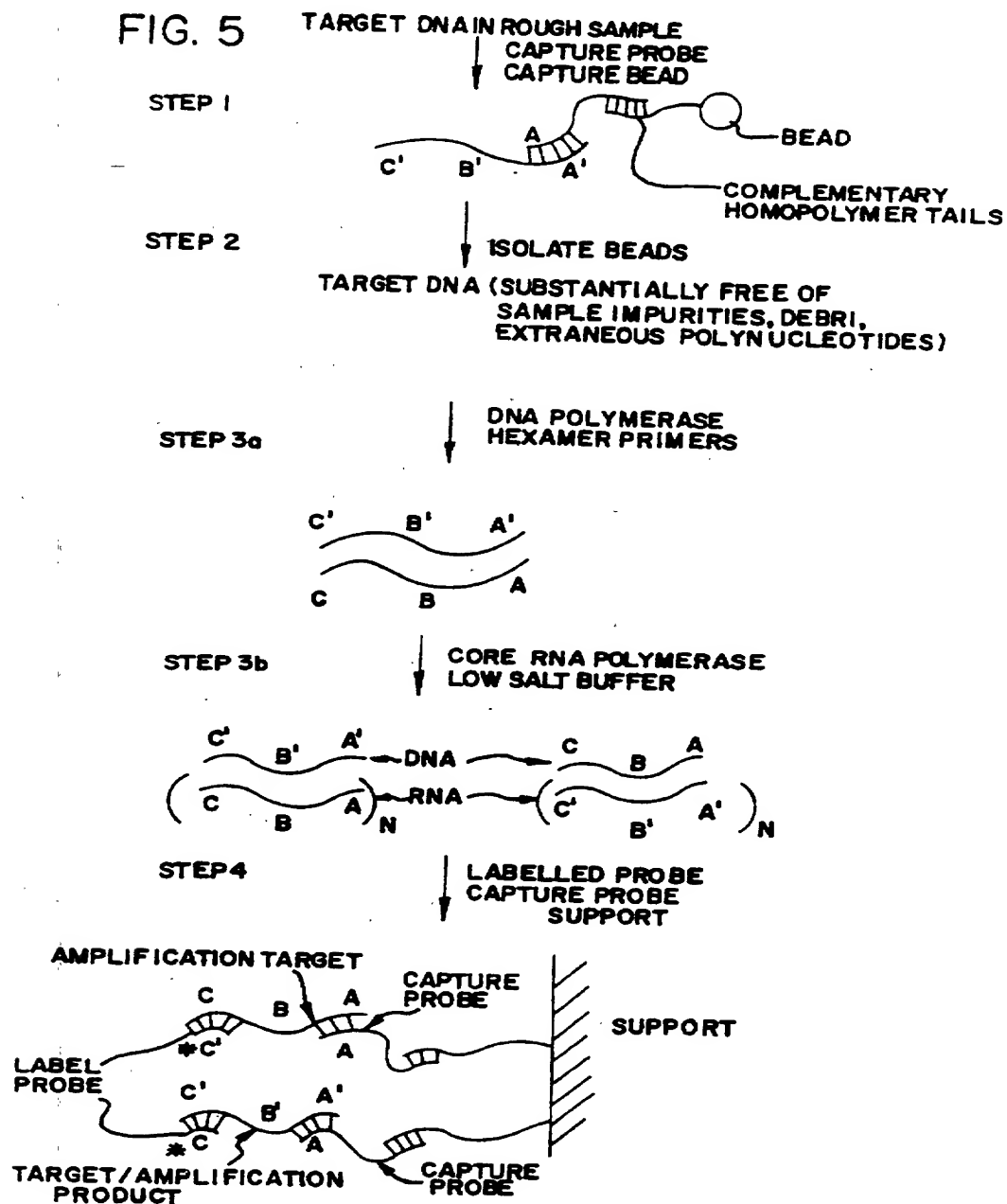


FIG. 4



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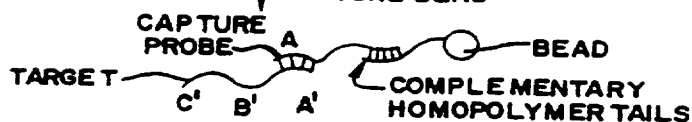
FIG. 5



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## STEP 1

**CAPTURE PROBE**  
**CAPTURE BEAD**



## STEP 2

## ISOLATE BEAD

**TARGET DNA (SUBSTANTIALLY FREE OF SAMPLE IMPURITIES, DEBRI, AND EXTRANEOUS POLYNUCLEOTIDES)**

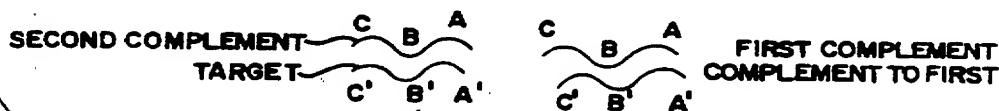
### STEP 3a

## DNA POLYMERASE HEXAMER PRIMERS



### STEP 3b

1. DENATURE  
2. DNA POLYMERASE



### STEP 4

DENATURE  
LABEL PROBE  
CAPTURE SUPPORT  
CAPTURE PROBE

**TARGET/AMPLIFICATION PRODUCT**

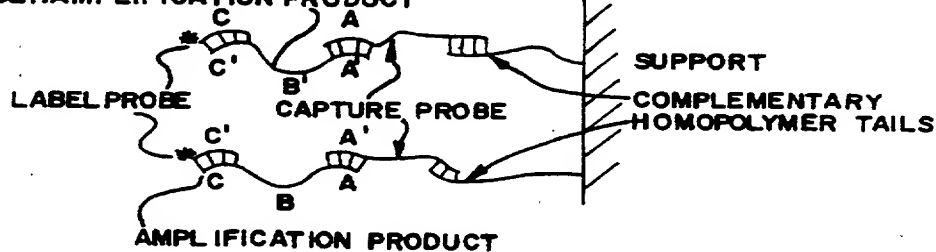
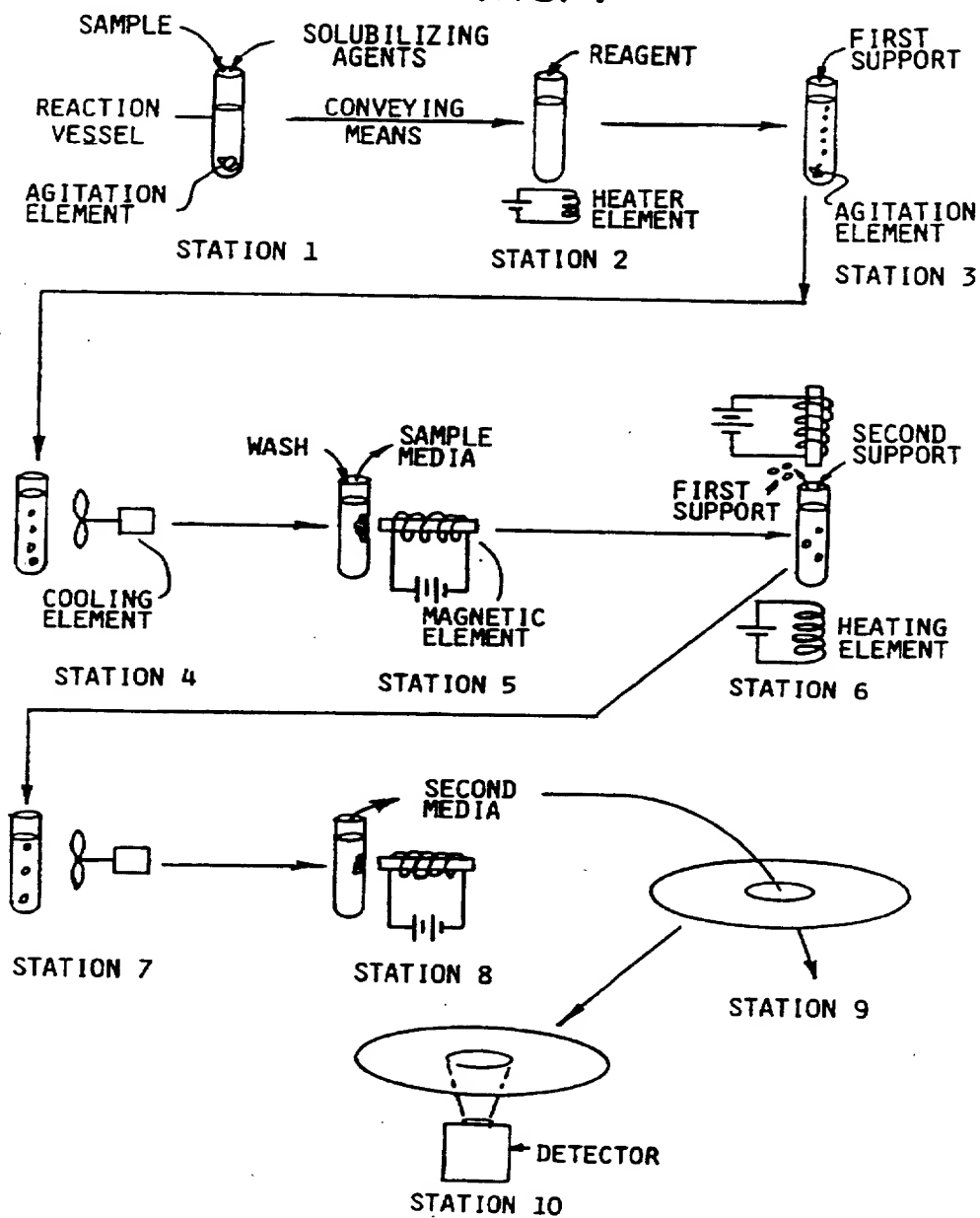
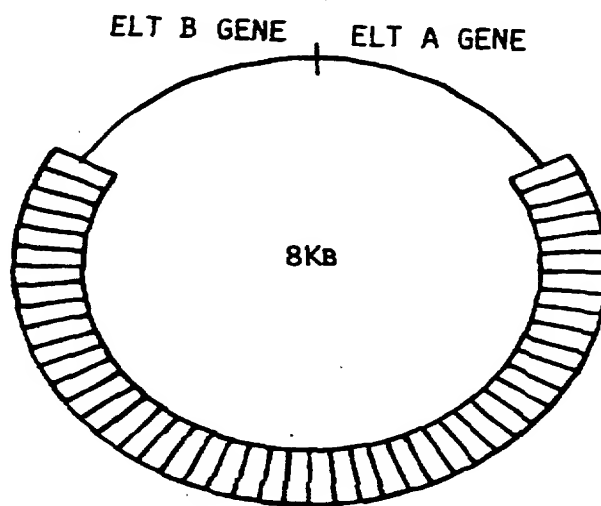


FIG. 7



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**FIG. 8**

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**VERISIS, INC.—US AND FOREIGN PATENTS/APPLICATIONS**

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Socioeconomic characteristics		Health status		Health care utilization		Health care costs	
Age	18-64	65-74	75+	Physician visits	Hospitalizations	Days in hospital	Days in nursing home
Gender	Male	Female					
Marital status	Married	Widowed	Divorced				
Education	Less than high school	High school	Some college				
Income	Less than \$10,000	\$10,000-\$19,999	\$20,000-\$29,999				
Health insurance	Medicaid	Medicare	Private				
Health status	Good	Fair	Poor				
Health care utilization	Physician visits	Hospitalizations	Days in hospital				
Health care costs	Days in hospital	Days in nursing home					

WYSIS, INC.-US and FOREIGN PATENT APPLICATIONS

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AS ORIGINALLY FILED

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